

REMARKS

In response to the Final Office Action mailed May 14, 2001, and the Advisory Action mailed October 18, 2002, Applicants respectfully request entry of this response and reconsideration of the above-identified application.

Claims 1-8, 10, 12-22, 24, 27-31, 35 and 40-120 are now pending in this application, of which claims 1, 2, 15, 30, 68, 90 and 98 are independent claims.

1. Summary of Telephone Conferences with Examiner

Applicants thank Examiner Logsdon, and Supervisory Examiner Kizou for the courtesies extended in conducting telephone interviews with Applicants' representatives on November 12, 2002 and November 14, 2002. During the first interview, Applicants' representatives discussed with the Examiners, the differences between Applicants' claims and the Simon reference, but were unable to reach agreement on the teachings of the reference and on the meaning of the term "pathway" recited in Applicants' claims. In the second interview, the Examiner Kizou indicated that the rejection of the claims in view of the Drummer reference would be withdrawn. Examiner Kizou also indicated that the Final Office Action and Advisory Action did likely not properly reject Applicants' independent claims 90 and 98, which include limitations of "providing the information signal for access by a passenger" and a "passenger interface," respectively. Examiner Kizou informed Applicants' representatives that the Final Office Action would be withdrawn, and suggested that the Applicants file a supplemental response. In view of the Examiners' comments, this supplemental response does not consider the previous rejections in view of Drummer.

2. Amendment to Claim 60

Applicants have amended claim 60 to insert the word "signal" after the first occurrence of "information" in the claim, thereby correcting an inadvertent typographical error. Claim 60, as amended, recites "the system as claimed in claim 17, wherein the information signal is digitally encoded with the information." This amendment is solely for the purpose of correcting a formal error in the claim, and is not being made for a substantial reason relating to patentability. Entry of the amendment to claim 60 is appropriate after issuance of a Final Office Action under 37 C.F.R. 1.116.

3. Rejection Under 35 U.S.C. § 102

The Office Action rejects claims 1,15-17, 19-22, 24, 29-31, 35, 68 and 98 under 35 U.S.C. § 102(b) as being anticipated by Simon (U.S. Patent No. 5,530,909). Applicants respectfully traverse this rejection.

As discussed in Applicants' response mailed April 19, 2002, Simon discloses a method of transmitting information that includes equipping aerodynes (e.g., aircraft) with VHF transceivers that act as transmission relays that permanently exchange information with relays momentarily within their range in order to pass the information from relay to relay from an emitting station to a destination (col. 1, lines 50-67 and col. 2, lines 1-2). Simon fails to disclose several features recited in Applicants' independent claims 1, 2, 15, 30, 68 and 98. (see Applicants' April response for a more complete summary of Simon).

In particular, Applicants' independent claim 1 recites, *inter alia*, "a method of providing information to at least one passenger vehicle located on a pathway ... to create an information network," and "receiving the information signal with a first transmitter/receiver unit located on a passenger vehicle that is ... located on the pathway." Applicants' independent claim 1 also recites "re-transmitting the information signal ... to a receiver located on the at least one passenger vehicle located on the pathway; wherein the information signal is transmitted from the first transmitter/receiver unit to the receiver along the pathway." The Office Action asserts that Simon inherently discloses that the aerodynes are located on pathways "because they, as well as anything else that moves, must inherently be located on a pathway." Applicants respectfully disagree.

According to the MPEP § 2111, claims must be given their "broadest reasonable interpretation" which must be consistent with the interpretation that those skilled in the art would reach. Furthermore, the MPEP states (in § 2111.01) that the words of a claim must be given their "plain meaning," which refers to the meaning given the term by those of ordinary skill in the art. Referring to Applicants' specification, the term "pathway" is used to describe a pre-existing way, such as, for example, a road or highway, a flight track, or a shipping lane, upon which passenger vehicles travel. See, page 19, lines 15-18 of Applicants' specification, where it is stated "it is to be understood that according to the invention, the pathways referred to in the

above description of embodiments of the invention are, for example, any of the roadways, waterways or airways maintained for use by any of the movable platforms described above.” For example, see also Figures 2A-H and Figures 3A-H, where passenger vehicles 50, 60, etc. (automobiles) are illustrated traveling on pathways, i.e., roads, and Figure 11, where aircraft 81, 82 and 83 are illustrated traveling along predetermined pathways (flight tracks). According to dictionary definitions, for example, the American Heritage dictionary, a “pathway” refers to “a beaten track,” “a road, way or track made for a particular purpose,” or “an established way.” Thus, the ordinary meaning of the term “pathway” is consistent with the way in which the term is used in Applicants’ specification. Therefore, the term “pathway” in Applicants claims means a predetermined, existing way, such as, for example, a road or highway, a flight track, or a shipping lane. By contrast, the Office Action states that a pathway is equivalent to any open space, a definition that is not consistent with the plain meaning of the word. The MPEP states that claim terms must be read “as they would be interpreted by those of ordinary skill in the art.” In view of Applicants’ specification, in view of the ordinary meaning of “pathway,” as provided by dictionaries, and the general accepted use of the term in the art, those of ordinary skill in the art would read “pathway” to mean a predetermined, existing way, and thus, this is the definition that should be imparted to the term by the Examiner.

Furthermore, according to the MPEP § 2112, in order to establish that a feature is inherently disclosed in the prior art, it must be clear that “the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities.” Applicants point out that, contrary to the assertion in the Office Action, many things that move are not necessarily located on pathways. For example, many small aircraft or small boats do not necessarily travel along pathways (such as flight tracks or shipping lanes), but travel randomly, according to the pilot’s whim. In particular, Simon discloses that the positions and directions of motion of the aerodynes change from one instant to another in an almost random manner (col. 2, lines 43-47). This disclosure suggests that the aerodynes are not located on pathways, for if they were, their positions and directions of motion would likely follow the known line of the pathway, and not change randomly from one instant to another. Therefore, contrary to the assertion in the Office Action, the aerodynes of Simon are not inherently disclosed to be located on pathways.

In addition, Applicants respectfully disagree with the assertion in the Office Action that “because the signal in Simon is sent from vehicle to vehicle, it must be sent along a pathway on which the vehicles are located.” First, as discussed above, Simon does not disclose or suggest that the aerodynes are located on pathways. Second, there is absolutely no mention or suggestion present in Simon that the signal “must” be transmitted along the pathway, but in fact Simon discloses the contrary, for example, in figure 1, where the signal is illustrated to be transmitted at an angle to the direction of motion of the aerodynes. Additionally, Applicants’ own specification discloses examples of another embodiment of Applicants’ invention wherein signals may be transmitted between vehicles, but not along a particular pathway on which the vehicles are travelling, thereby providing further evidence that transmission of the signal along the pathway is not a necessary result of transmitting the signal between two vehicles, although it is a claimed feature of one embodiment of Applicants’ invention. Thus, transmission of the signal along the pathway is not “necessarily present” in Simon’s disclosure, which firstly fails to disclose pathways at all, and second provides absolutely no indication that signal transmission should be along a pathway.

Therefore, for at least these reasons, Applicants’ independent claim 1 is not anticipated by Simon because Simon fails to disclose several limitations recited in Applicants’ claim 1. Withdrawal of the rejection of claim 1 is therefore respectfully requested.

Although Applicants’ independent claim 2 is not explicitly rejected in the Office Action as being anticipated by Simon, Applicants assume that the Examiner intended to reject claim 2 because the rejection includes language regarding “a destination” that is not present in Applicants’ independent claims 1, 30, 68 and 98, and because in the § 103 rejection, the Office Action fails to suggest any modifications to the cited references in relation to claim 2. Thus Applicants have responded as though claim 2 was also rejected as being anticipated by Simon. Applicants’ independent claim 2 recites, *inter alia*, “transmitting an information signal containing the information with a transmitter located on the at least one passenger vehicle on the pathway,” “receiving the information signal with a first transmitter/receiver unit located on a passenger vehicle, located on the pathway,” and re-transmitting the information signal ... to a receiver located at the destination; wherein the information signal is transmitted from the transmitter to the first transmitter/receiver unit along the pathway.” Similarly, Applicants’ independent claim 30 recites, *inter alia*, “transmitting an information signal containing the

information from an information source to a first transmitter/receiver unit located on a first passenger vehicle located on a first predetermined pathway,” “repeating the steps of receiving and re-transmitting the information signal with another transmitter/receiver unit located on a third passenger vehicle,” and “receiving the information signal with a receiver that is located on a second passenger vehicle located on a second predetermined pathway.” Similarly, Applicants’ independent claim 68 recites, *inter alia*, “first transmitter/receiver unit located on a first passenger vehicle located on a first predetermined pathway,” and “a receiver that receives the information signal re-transmitted by the second transmitter/receiver unit, the receiver being located on a third passenger vehicle that is located on a second predetermined pathway.” As discussed above in reference to claim 1, Simon does not disclose, neither explicitly nor inherently, that the aerodynes are located on pathways, or that the signal is transmitted along a pathway. Therefore, for at least these reasons, Applicants’ independent claims 2, 30 and 68 are not anticipated by Simon, and withdrawal of the rejection of the claims 2, 30 and 68 is respectfully requested.

Applicants’ independent claim 15, recites, *inter alia*, “a first transmitter/receiver unit located on a first passenger vehicle that is located on a pathway,” and “a directional antenna, coupled to the transmitter/receiver unit that re-transmits the information signal along the pathway.” As discussed above with reference to claims 1 and 2, Simon does not disclose or suggest, neither explicitly nor inherently, that the aerodynes are located on pathway. Furthermore, Simon discloses that the method of signal transmission between relays can be extended to include S mode (radar) communications, where data transfer takes place when the transponder (aircraft) responds to interrogation from the radar (col. 5, lines 33-41). This is additional, and separate, from the relay system where a signal is transmitted from aerodynes to aerodyne in order to provide the signal between an emitting station and a receiving station. Applicants do not agree with assertion in the Office Action that radar uses a directional antenna, and request that the Examiner provide a prior art reference disclosing that the type of radar discussed in Simon uses a directional antenna (see MPEP § 2144.03). However, even if the radar does use a directional antenna, Simon does not disclose that the transceivers located on the aerodynes are equipped with directional antennas. Simon discloses only that the transceivers may transfer data to the interrogating radar, not that the transceivers do so using directional antennas. Furthermore, the radar interrogation system is disclosed by Simon to be additional to

the relay transmission method, not forming part of the chain of transmission between aerodynes. Simon does not disclose or suggest that the transceivers use directional antennas to transmit the signal from one relay (aerodyne) to another. As discussed above, a rejection based on inherency must establish that the feature or element is necessarily present in the prior art disclosure. The fact that a certain result or characteristic may be present in the prior art in not sufficient to establish the inherency of that result or characteristic. Although it may be possible for the transceivers to use directional antennas, it is not necessary to their operation. Therefore, Simon does not inherently disclose that the transceivers use directional antennas.

Thus, Simon fails to disclose, either explicitly or inherently, at least two features recited in Applicants' independent claim 15. Accordingly, claim 15 is not anticipated by Simon, and withdrawal of the rejection of claim 15 is respectfully requested.

Applicants' independent claim 98 recites, *inter alia*, a first passenger interface adapted to present the information for access by a passenger associated with the first passenger vehicle," and "a second passenger interface adapted to present the information for access by a passenger associated with the second passenger vehicle." The Office Action does not provide any indication of where the Examiner believes this feature may be found in Simon. Applicants assert that Simon does not disclose a passenger interface adapted to present the information for access by a passenger associated with the passenger vehicle. Applicants therefore request that the Examiner withdraw the rejection of claim 98 as being anticipated by Simon, or provide a specific citation to the paragraph(s) of Simon where the Examiner believes a passenger interface is disclosed.

Each of dependent claims 16, 17, 19-22, 24, 29, 31 and 35 depends, either directly or indirectly from one of independent claims 15 and 30. Therefore, each of these dependent claims is allowable for at least the same reasons as discussed for the respective base claim. Accordingly, withdrawal of the this rejection of claims 16, 17, 19-22, 24, 29, 31 and 35 is respectfully requested.

In addition, Applicants respectfully disagree with the assertion in the Office Action, in reference to claim 16, that "each aerodyne in Simon is inherently located in an area where there is an already existing communication channel because the transceiver communicates." Simon discloses that the transceivers communicate between each other. This is not an already existing communication channel, because it is not established until one transceiver needs to communicate

with another. Simon does not disclose that any of the aerodynes, and specifically not a first aerodyne in the chain, i.e., the one that receives the signal from the emitting station, is located where there is an already existing communication channel, i.e., another communication channel in addition to any communication link set-up between the transceiver and the emitting station.

Further, Applicants respectfully disagree with the assertions in the Office Action, in reference to claim 29, that “each aerodyne is inherently both a pathway station and a pathway control station because each aerodyne monitors the other aerodynes along a pathway because aerodynes can link up with each other momentarily,” that “each aerodyne is inherently coupled to itself,” that “each aerodyne is inherently coupled to an existing network because it forwards received data to other aerodynes,” and that “each aerodyne inherently controls communication between itself and the existing network because the aerodyne is part of the network.” As discussed above, communication between the aerodynes is not an already existing communication network because it is not established until one transceiver needs to communicate with another. Simon also does not disclose that any aerodyne monitors other aerodynes. Rather Simon discloses a method wherein aerodynes momentarily interconnect to establish communication links and transfer data when within range of one another, which method does not include any monitoring of one aerodyne by another. As discussed above, in order for something to be inherently disclosed, it must be necessarily, not possibly, present in the explicit disclosure. None of the features recited in Applicants’ claim 29 are necessarily present in Simon, and the Examiner is improperly broadening the scope Simon by attempting to read in these features.

4. Rejections Under 35 U.S.C. § 103

A. Simon

The Office Action rejects claims 2-8, 10, 12-14, 16, 17, 19-22, 29-31, 35, 40-67, 69-97, and 99-120 under 35 U.S.C. § 103(a) as being unpatentable over Simon. Applicants respectfully traverse this rejection.

As discussed above, Simon fails to disclose or suggest, either explicitly or inherently, several features recited in Applicants’ independent claims 1, 2, 15, 30, 68 and 98. In addition, with respect to claim 90, Applicants respectfully disagree that it would have been obvious to one of ordinary skill in the art to modify Simon so that the information is provided for access by a passenger ... because the passenger may desire to have access to the information.” Simon

discloses only that the aerodynes act as relays to pass the information between an emitting station and a receiving station. Simon does not disclose what the information is, and in fact makes absolutely no mention of passengers associated with the aerodynes at all. Although it may be reasonable to infer that there may be passengers associated with the aerodynes, suggesting that a presumed-present passenger "may desire access to the information" is pure speculation based solely on Applicants' own disclosure. There is no teaching or suggestion present in the prior art of record to suggest modifying Simon in this manner, and thus, the Examiner is using improper hindsight to make the modification. Accordingly, the asserted modification is improper.

Each of the dependent claims 3-8, 10, 12-14, 16, 17, 19-22, 29, 31, 35, 40-67, 69-89, 91-97, and 99-120 depends, either directly or indirectly, from one of the independent claims discussed above. Thus, each dependent claim is allowable for at least the same reasons as discussed for its respective base claim. Accordingly, Applicants do not at this time argue the allowability of each of the dependent claims individually. However, Applicants do not concur that the basis for the rejection of any of the dependent claims is proper, and expressly reserve the right to argue the patentability of each dependent claim individually in the future. In particular, Applicants do not agree that any of the limitations recited in claims 2-8, 10, 12-14, 16, 17, 19-22, 24, 29-31, 35, 40-67, 69-89, 91-97 and 99-120 are well known in the art, and request that the Examiner provide prior art references disclosing each limitation, either in combination with all the limitations recited in any base claims from which rejected dependent claims depend, or with proper motivation to combine the new reference with one of the primary references already cited.

Withdrawal of the rejection of claims 2-8, 10, 12-14, 16, 17, 19-22, 29-31, 35, 40-67, 69-97, and 99-120 is respectfully requested.

B. Simon and Rootsey

The Office Action rejects claims 18 and 28 as being unpatentable over Simon in view of Rootsey (U.S. Patent No. 5,995,804). Applicants respectfully traverse this rejection.

First, Applicants do not agree that the combinations of Simon and Rootsey suggested in the Office Action are proper. With respect to claim 18, the Office Action asserts that it would have been obvious to modify Simon so that the passenger vehicles are ground vehicles, as in

Rootsey, because the passenger vehicles would then be easily accessed for maintenance.

Applicants respectfully disagree.

An invention is unpatentable under 35 U.S.C. § 103 if the differences between it and the prior art “are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” In re Dembiczak, 175 F.3d 994, 998, (1999) citing Graham v. John Deere Co., 383 U.S. 1, 14 (1996). The court in Dembiczak stresses the importance of avoiding hindsight when measuring the claimed invention against the standard established by § 103, and being guided only by the prior art references themselves and the then-accepted wisdom in the field. 175 F.3d 994, 999. In Dembiczak, the obviousness rejections resulted from a combination of conventional trash bags, and the Holiday and Shapiro publications which taught the construction of decorated paper bags. The Board of Appeals and Interferences justified the combination of references by simply stating that the Holiday and Shapiro references would have suggested the application of facial indicia to plastic trash bags. Id. at 1000. The court held that the Board’s “reference by reference, limitation by limitation” analysis failed to demonstrate how the Holiday and Shapiro references taught or suggested their combination with conventional trash bags, and that thus the Board’s conclusion of obviousness was not supported as a matter of law. Id. Thus, it is a fundamental principle of patent law that, to support an obviousness rejection, the Examiner must specifically identify a motivation or suggestion in the prior art to change the prior art to fall within the scope of the claims. If a specific motivation or suggestion in the prior art is not specified, the rejection cannot be maintained.

In the art cited, there is no motivation or suggestion to combine the references as asserted. The suggested combination of Simon and Rootsey is based solely on Applicants’ own disclosure, which is improper hindsight. The motivation offered by the Examiner is pure speculation, not suggested in either Simon or Rootsey, and is firstly flawed, and secondly improperly based on Applicants’ own disclosure. First, there is absolutely no reason to believe that ground vehicles are any more easily accessed for maintenance than aircraft which must necessarily periodically return to the ground. It is reasonable to assume that ground vehicles cannot be accessed for maintenance at any time, but rather only when present at a maintenance facility, a condition that equally applies to aircraft. Thus, the Examiner’s motivation is flawed. Second, Simon provides no suggestion that it may be desirable to use ground vehicles, and

Rootsey discloses a system very different to that disclosed by Simon, and thus neither reference provides any motivation to make the asserted combination. The suggested combination of Simon and Rootsey is thus improper.

With respect to claim 28, the Office Action asserts that Rootsey discloses that where supplemental networks exist, i.e., in populated areas with licensed terrestrial broadcasters, the repeater onboard the vehicle is shut down, and that this disclosure suggests the converse, i.e., that supplemental networks may be used to provide service when movable repeaters are unavailable. The Office Action further asserts that it would have been obvious to modify Simon based on the modified Rootsey. Applicants respectfully disagree. Rootsey does not suggest using a supplemental network to provide the information signal when insufficient passenger vehicles are available to provide the information signal to the passenger vehicle, as is claimed in Applicants' claim 28. The Examiner is relying on Applicants' own claim to improperly modify the prior art. Furthermore, Simon does not disclose or suggest this feature, and provides no motivation either for modifying Rootsey as suggested in the Office Action or for making the asserted combination. As discussed above, the law requires that to support an obviousness rejection, the Examiner must specifically identify a motivation or suggestion in the prior art to change the prior art to fall within the scope of the claims. Absent Applicants' own disclosure, there is no teaching or suggestion present in the art of record to make the asserted modification and combination, and thus the Examiner is relying on impermissible hindsight. The suggested modification and combination is thus improper.

In addition, Simon fails to disclose several features recited in Applicants' independent claim 15, from which both claims 18 and 28 indirectly depend. Furthermore, Simon fails to disclose the additional features recited in Applicants' claim 17, from which claims 18 and 28 depend directly. Rootsey fails to cure the deficiencies of Simon, and thus any combination of Simon and Rootsey fails to disclose or suggest all the features present in the base claims 15 and 17. Therefore, dependent claims 18 and 28, which include by reference all the features of the base claims 15 and 17, patentably distinguish over the combination of Simon and Rootsey suggested in the Office Action. Accordingly, withdrawal of the rejection of claims 18 and 28 is respectfully requested.

5. Conclusion

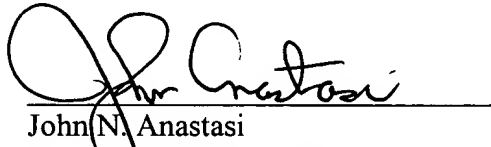
In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension of time fee, that is not covered by an enclosed check, please charge any deficiency to deposit account No. 23/2825.

Respectfully submitted,

Michael Barrett, et al., Applicants

By:


John N. Anastasi
Registration No. 37,765
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, MA 02210-2211
Tel. no. (617) 720-3500
Attorneys for Applicants

Docket No. A00602/70002
Date: November 14, 2002
x 08/14/02x

MARKED-UP CLAIMS

60. (Amended) The system as claimed in claim 17, wherein the information signal is digitally encoded with the information.